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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/932,940	08/21/2001	Kyung-Suk Yun	300602002100	5389

25227 7590 08/26/2003

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EXAMINER

KALAFUT, STEPHEN J

ART UNIT

PAPER NUMBER

1745

DATE MAILED: 08/26/2003

7

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Applicati n N .

09/932,940

Applicant(s)

YUN ET AL.

Examiner

Steve Kalafut

Art Unit

1745

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 27 June 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4 and 6-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 2-4 and 6 is/are allowed.
- 6) ☒ Claim(s) 1 and 7-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other:

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Claims 1 and 7-11 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the written description requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to reasonably convey to one skilled in the relevant art that the inventor(s), at the time the application was filed, had possession of the claimed invention. Claim 1 recites that the carbon electrode is a solid sheet. Claim 10 recites that the electrode comprises a solid sheet of carbon. While applicants point out that the present carbon body is cast onto a substrate, and is thus solid, the claimed recitation of solid sheet of carbon is broader than the subject matter supported by the original disclosure, which is actually a sheet of a composite material which includes a carbon component. A solid sheet of carbon, on the other hand, may also be made entirely of carbon, which is not supported by the original disclosure. These claims would thus contain new matter. Claims 7-9 and 11 depend from claims 1 or 10, and would thus also contain new matter.

Claims 1 and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by either Kato *et al.* (US 5,879,791) or Adam *et al.* (US 6,068,931).

Kato *et al.* disclose a plate, which would be a solid sheet, composed of PTFE and carbon fiber, next to a layer of porous copper, which is a metal (column 4, lines 41-56). Thus, a solid carbon sheet, to the extent that one is presently disclosed, is placed next to a porous metal film. While the PTFE then coats and impregnates the porous copper, the two-layer composite would read upon the present claims before the impregnation is completed.

Adam *et al.* disclose a layer, which would be a solid sheet, composed of materials including graphite or carbon black, next to a backing of porous sintered bronze, which is an alloy

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(column 3, lines 45-65). Thus, a solid carbon sheet, to the extent that one is presently disclosed, is placed next to a porous metal alloy film.

Regarding either Kato *et al.* or Adam *et al.*, recitations of intended use, such as “electrode”, do not distinguish.

Claims 2-4 and 6 are allowed. The step of stabilizing the metal coating at the recited pressure, temperature and time is not disclosed by the prior art of record or newly applied above.

Claims 7-9 and 11 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, first paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims. These claims recite batteries comprising the present electrode, and would thus distinguish over the prior art above.

The substitute specification filed 6/27/03 has not been entered because it does not because: the specification completely reverses the terms “anode” and “cathode” through its entirety, and not just in the particular places where the original specification used the terms incorrectly. For example, in the original specification, on page 9, lines 2 and 3, LiCoO_2 is incorrectly called an “anode”, while elsewhere, such as on page 9, lines 13 and 18, this material is correctly called a “cathode”. Any confusion caused by the first Office Action is regretted. Note that original claim 7 also incorrectly called LiCoO_2 and other metal oxides “anodes”, while amended claim 7 correctly calls these “cathodes”. The carbon electrode would be the anode.

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Applicant's arguments with respect to claims 1-4 and 6-11 have been considered but are moot in view of the new ground(s) of rejection.

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Steve Kalafut whose telephone number is 703-308-0433. The examiner can normally be reached on Mon-Fri 8 am-4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Patrick J. Ryan can be reached on 703-308-2383. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

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Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0661.

sjk


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